## VCU Study Suggests Use Of Low-Dose Oral Contraceptives May Increase Risk For Heart Attack Or Stroke

RICHMOND, Va. (July 7, 2005) – Women using low-dose oral contraceptives are at an increased risk for a heart attack or stroke while taking the pill – however the risk disappears after discontinuation, according to a Virginia Commonwealth University study published in the July issue of the Journal of Clinical Endocrinology and Metabolism.

The findings could have further significance for those women taking low-dose oral contraceptives who already are at increased risk for such events because of polycystic ovary syndrome, or metabolic disorder, according to John Nestler, M.D., professor and chair of the Division of Endocrinology and Metabolism in the VCU School of Medicine.

In the study, researchers reported that the overall estimated risk of cardiovascular events – both heart attack and stroke -- among current ow-dose oral contraceptive users was doubled compared to non-users. The findings are based on a meta-analysis of peer-reviewed literature. The researchers examined several separate-but-similar experiments that were designed to assess the risk of cardiovascular disease associated with the current use of low-dose oral contraceptives in the population-at-large. The analysis included studies published between January 1980 and October 2002.

"The study suggests that women in general are at an increased risk of having a cardiovascular event while taking even these third-generation, low-dose, birth control pills," said Nestler. "Prolonged exposure to low-dose oral contraceptives in a population at higher risk may significantly increase the incidence of cardiovascular outcomes and prompt consideration of alternative therapeutic or contraceptive interventions," he wrote. "A number of women with metabolic syndrome or polycystic ovary syndrome already are at increased risk for heart attack, and a majority of women with PCOS are treated with low-dose oral contraceptives for a prolonged period of time," he said. "An insulin-sensitizing drug might confer better general health benefits than the oral contraceptive."

"For example, insulin-sensitizing drugs have been shown to decrease progression to Type 2 diabetes, and there is evidence suggesting that they also may lower the risk of cardiovascular disease and have beneficial effects on cardiovascular risk factors," he said. PCOS is a condition that can affect a woman's menstrual cycle, fertility, hormones, insulin production, heart, blood vessels and appearance. "Despite the doubling of risk associated with the pill, the absolute risk for a cardiovascular event in an individual woman taking the pill is low. Women using the pill are not going to automatically have a heart attack," said Nestler. "However, our findings do raise the issue of whether oral contraceptives are optimal therapy for certain groups of women who are at

baseline risk or who are taking the pill for a longer time, such as women with PCOS."

According to Nestler, previous epidemiological studies have shown an increased risk of cardiovascular events associated with oral contraceptives in women with hypertension, migraines, or who smoke. Nestler collaborated with Jean-Patrice Baillargeon, M.D., from the Université de Sherbrooke in Canada, and Paulina A. Essah, M.D., of VCU's Division of General Internal Medicine. The research was supported by a grant from the National Institutes of Health and the Fond de Recherche en Santé du Québec.

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About VCU and the VCU Medical Center: Located on two downtown campuses in Richmond, Va., Virginia Commonwealth University is ranked nationally by the Carnegie Foundation as a top research institution and enrolls more than 28,500 students in more than 181 certificate, undergraduate, graduate, professional and doctoral programs in the arts, sciences and humanities in 15 schools and one college. Forty of the university's programs are unique in Virginia, and 20 graduate and professional programs have been ranked by U.S. News & World Report as among the best of their kind. MCV Hospitals, clinics and the health sciences schools of Virginia Commonwealth University compose the VCU Medical Center, one of the leading academic medical centers in the country. For more, see <a href="https://www.vcu.edu">www.vcu.edu</a>.

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